

**Vol. 15, No. 1 — First Quarter 1991**

Review Article: Polymer solid electrolytes: Charge transport mechanisms <i>M. A. Ratner</i> .....	1
Fourth Australian Conference on II-VI Semiconductor Compounds, Warburton, Victoria, Australia, April 1990 Sources of Group II-IV elements in Australia <i>D. F. A. Koch</i> .....	16
nCdS/pCdTe thin film solar cells: Comparisons between cells with different efficiencies <i>G. C. Morris, P. G. Tanner and A. Tottszer</i> .....	21
The scope of CdTe growth for production of epitaxial substrates <i>R. Triboulet</i> .....	30
Cd <sub>1-x</sub> Mn <sub>x</sub> Te/Cd <sub>1-y</sub> Te superlattices by low temperature MOCVD <i>G. N. Pain, S. P. Russo, R. G. Elliman, L. S. Wielunski, D. Gao, S. R. Glanvill, C. J. Rossouw, A. W. Stevenson, R. S. Rowe, G. B. Deacon, R. S. Dickson and B. O. West</i> .....	35
Quantitative surface analysis of II-VI compounds <i>G. C. Morris and B. J. Wood</i> .....	44
Nuclear Microscopy of semiconductor heterostructures <i>D. N. Jamieson</i> .....	51
Adsorption on cadmium telluride and mercury telluride surfaces <i>K. A. I. L. Wijewardena, D. Neilson and J. Szymanski</i> .....	57
Mechanical and dielectric characterization of a side-chain liquid crystal polymer over a wide frequency range <i>G. P. Simon, A. Kozak, G. Williams and R. E. Wetton</i> .....	71
Factors influencing deformation of superplastic alloys. Part II: Grain boundary sliding <i>R. C. Gifkins</i> .....	82
Dynamic tear testing of modern structural steels <i>N. U. Ahmed and J. M. Yellup</i> .....	95
Anisotropy of mechanical properties of aluminium-lithium alloy sheet <i>I. M. Robertson</i> .....	102
Short Communication: Environmental influence on cathodic protection criteria for reinforced concrete structures: A theoretical approach <i>M. G. Ali and Rasheeduzzafar</i> .....	112

**Vol. 15, No. 2 — Second Quarter 1991**

Review Article: A review of investigations of the magnetization of steel due to the application of stress <i>I. M. Robertson</i> .....	117
Review Article: A review of wide bandgap II-V compounds <i>S. Shionoya</i> .....	132
Electrodeposited cadmium mercury telluride films <i>G. C. Morris and M. Marychurch</i> .....	143
Application of Rutherford backscattering and ion channelling in structure analysis of MOCVD-grown $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ epitaxial layers and $\text{HgTe/CdTe}$ superlattices <i>L. S. Wielunski, M. J. Kenny and G. N. Pain</i> .....	150
Photoluminescence spectroscopy of cadmium telluride films for solar cells <i>G. C. Morris and A. Tottszer</i> .....	157
Comparison between evaporated and electrodeposited cadmium sulfide for $\text{nCdS/pCdTe}$ solar cells <i>G. C. Morris, A. Tottszer and S. K. Das</i> .....	164
The passivation of semiconductor surfaces — a review of successes and failures <i>E. E. Crisman, C. B. Roberts and P. J. Stiles</i> .....	171
Preparation and properties of undoped and copper doped zinc telluride films <i>G. C. Morris and P. G. Tanner</i> .....	179
Photoconductivity of $\text{A}^2\text{B}^6$ thin films under ultrafast excitation <i>J. Vaitkus, J. Storasta, M. Petrauskas, R. Tomasiunas, R. Masteika and A. Zindulis</i> .....	185
A laboratory study of abrasive wear of liner materials for the refractory industry <i>L. Xu and N. F. Kennon</i> .....	191

**Vol. 15, No. 3 — Third Quarter 1991**

Review Article: Electrorheological fluids and their applications <i>P. J. Burchill</i> .....	197
Review Article: Continuous casting of steel: An update <i>L. T. Hamilton</i> .....	205
Technological applications of crystallographic textures of zirconium alloys <i>K. L. Murty</i> .....	217
The strength properties of clearwood <i>P. D. Evans</i> .....	231
The grain size dependence of the flow stress in metals and alloys <i>B. A. Parker</i> .....	245
New concepts in stabilization and replacement of bones and joints <i>R. L. Huckstep and P. P. Lutton</i> .....	253
An XPS investigation of impurity glass in Y-TZP <i>A. E. Hughes and S. P. S. Badwal</i> .....	261
Hot isostatic pressing of Al-10% Mg alloy castings <i>G. R. Wakefield and R. M. Sharp</i> .....	268
Surface contamination measurement and control by non-destructive techniques <i>T. Chandra and A. Aurora</i> .....	274
Narrow-gap semimagnetic semiconductors <i>R. R. Galazka</i> .....	279
Effects of heat treatment on abrasive wear behaviour of a Ni-Cr-Mo-C tool steel <i>N. F. Kennon and L. Xu</i> .....	287

**Vol. 15, No. 4 — Fourth Quarter 1991**

Review Article: Structural timber <i>W. G. Keating</i> .....	293
Review Article: Mechanical and thermal shock properties of duplex-ceramics — a review <i>E. H. Lutz and M. V. Swain</i> .....	307
The effect of grain boundary $\gamma'$ precipitation on the stress rupture behaviour of nimonic PE16 <i>C. J. Moss and J. W. Martin</i> .....	324
Morphology of impact damage growth by fatigue in carbon fibre composite laminates <i>G. Clark and D. S. Saunders</i> .....	333
The influence of large particles on restoration behaviour of cold-worked 6061A/ $\text{Al}_2\text{O}_3$ composite <i>T. Chandra and D. Yu</i> .....	343
Studies of flexure of two different woven-fabric Kevlar/Epoxy composites <i>K. Padmanabhan, S. Sashidhara and Kishore</i> .....	354
A technique for <i>in situ</i> SEM study of the fatigue behaviour of metals and ceramics <i>O. Ø Mouritsen and B. L. Karihaloo</i> .....	360
Microstructures in quenched and tempered 0.14%C–1.96%C– 3.6%Ni steel deformed in tension <i>Y-M. Liu</i> .....	366
Preliminary laboratory study of steel slag for blended cement manufacture <i>D. G. Montgomery and G. Wang</i> .....	374
Short Communication: Ionic conductivity of 2 mol% $\text{Y}_2\text{O}_3$ + 2 mol% $\text{Yb}_2\text{O}_3$ – $\text{ZrO}_2$ single grain <i>S. P. S. Badwal, M. V. Swain and G. A. Gogotsi</i> .....	383
Book Reviews .....	388
Author index to volume 15 .....	392
Subject index to volume 15 .....	393

